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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/770,932

Filing Date: February 03, 2004

Appellant(s): HENDRY, JAMES W.

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John A. Artz  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed November 30, 2007 appealing from the Office action mailed October 12, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relyed Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

*Claim Rejections - 35 USC § 102/103*

Claims 12, 14 and 16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shah et al. (US Patent 5,558,824). Shah et al. discloses the claimed limitations in Figure 2 (column 3, line 25-column 4, line 55). Specifically, Shah et al. teaches a control valve (78), which is controlled by a pressure sensor (79) connected by a circuit (85) to a microprocessor (83). The microprocessor (83) provides signals to control the degree of opening of the control valve (78) (column 4, lines 36-40). This microprocessor, pressure sensor, circuit, are inherently “electrical” as claimed in instant claim 12, and operate as a pressure switch as claimed in instant claim 16. Further, the valve (78) taught by Shah et al. is capable of performing the intended function of instant claim 12. Shah et al. thereby anticipates claims 12, 14 and 16.

Alternatively, Shah et al. teaches the basic limitations of claims 12, 14 and 16, as discussed above. Shah et al. does not specifically teach that the valve (78) is electrically infinitely controlled. The claimed valve is generally well known in the art (instant specification, paragraph 24). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a generally well known valve, such as an electrically infinitely controlled valve, to further define the apparatus taught by Shah et al., in order to quickly and easily control the valve.

***Claim Rejections - 35 USC § 103***

Claims 13, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah et al., as applied to claims 12, 14 and 16 above, and further in view of Guergov (US Patent 6,019,918). Shah et al. teaches the basic apparatus in Figure 2 (column 3, line 25-column 4, line 55); i.e., a control valve (78), which is controlled by a pressure sensor (79) connected by a circuit (85) to a microprocessor (83). The microprocessor (83) provides signals to control the degree of opening of the control valve (78) (column 4, lines 36-40).

Regarding claim 13, Shah et al. does not teach an ejector. Regarding claims 17 and 18, Shah et al. does not teach that the gas pin and ejector pin are combined into one assembly. Guergov teaches an apparatus for gas assist injection molding, including an ejector pin (288) and a gas injector (220) which, in Figure 16, are combined into one assembly. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the ejector pin/gas pin assembly taught by Guergov to modify the apparatus taught by Shah et al., in order to remove the part from the mold. The motivation for combining Guergov with Shah et al. is that both are in the same field of endeavor, that of gas assist injection molding.

**(10) Response to Argument**

***A. Arguments drawn to Claim Rejections - 35 USC § 102/103***

Regarding independent claim 12, Shah et al. teaches a control valve (78), which is controlled by a pressure sensor (79) connected by a circuit (85) to a microprocessor (83). Applicants' arguments regarding Shah et al. not teaching the *use* of a gas pressure valve "as the plastic material is injected and later when it is necessary to allow the plastic material to completely fill the mold cavity". This is a method limitation. A recitation of the intended use of the claimed invention must result in a

structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The microprocessor (83) provides signals to control the degree of opening of the control valve (78) (column 4, lines 36-40). This microprocessor, pressure sensor, circuit, are inherently "electrical" as claimed in instant claim 12, and operate as a pressure switch as claimed in instant claim 16. Further, the valve (78) taught by Shah et al. is capable of performing the intended function of instant claim 12. Because Shah et al. discloses the valve, pressure sensor, and microprocessor, it discloses the limitations of claim 12.

Alternatively, Shah et al. teaches the basic limitations of claims 12, 14 and 16, as discussed above. Shah et al. does not specifically teach that the valve (78) is electrically infinitely controlled. The claimed valve is generally well known in the art (instant specification, paragraph 24). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a generally well known valve, such as an electrically infinitely controlled valve, to further define the apparatus taught by Shah et al., in order to quickly and easily control the valve.

Applicants' arguments are drawn to method limitations, such as in paragraph VII A, on page 5, where the gas pressure valve removes gas from the mold cavity "as the plastic material is injected and later when it is necessary to allow the plastic material to completely fill the mold cavity". Additionally, on page 6, Shah et al. "does not disclose or teach the *use* of a pressure switch" (emphasis added by examiner) to control the operation of the infinitely adjustable pressure control valve. On page 7, Shah et al. "does not teach the *use* of a gas pressure valve for removing the gas from the mold cavity as the plastic material is injected into it and later when it is necessary to allow the plastic to completely fill the mold cavity" (emphasis added by examiner). A recitation of the

intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Because the apparatus taught by Shah is capable of performing the intended functions as claimed in the instant claims, it renders the instant claims obvious or unpatentable.

***B. Arguments drawn to Claim Rejections - 35 USC § 103***

Regarding claim 13, Shah et al. does not teach an ejector. Regarding claims 17 and 18, Shah et al. does not teach that the gas pin and ejector pin are combined into one assembly. Guergov teaches an apparatus for gas assist injection molding, including an ejector pin (288) and a gas injector (220) which, in Figure 16, are combined into one assembly. Applicants' argument that there is no motivation to combine Shah et al. and Guergov to result in the features of claims 13, 17 and 18 is not persuasive. The motivation for combining Guergov with Shah et al. is that both are in the same field of endeavor, that of gas assist injection molding.

On page 9, Applicant argues that the Shah et al. and Guergov references do not teach "the use of an infinitely adjustable pressure control valve to perform these functions". This argument is again, a method limitation. The Guergov reference is utilized to teach the ejector pin and gas assembly, and the Shah et al. reference is utilized to teach the valve, pressure sensor, and microprocessor. Because the apparatus taught by Shah and modified by Guergov is capable of performing the intended functions as claimed in instant claims 13, 17 and 18, it renders the instant claims obvious.

**(II) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Suzanne E. McDowell/

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